

PRODUCT INFORMATION LEWABRANE® RO S440 HF



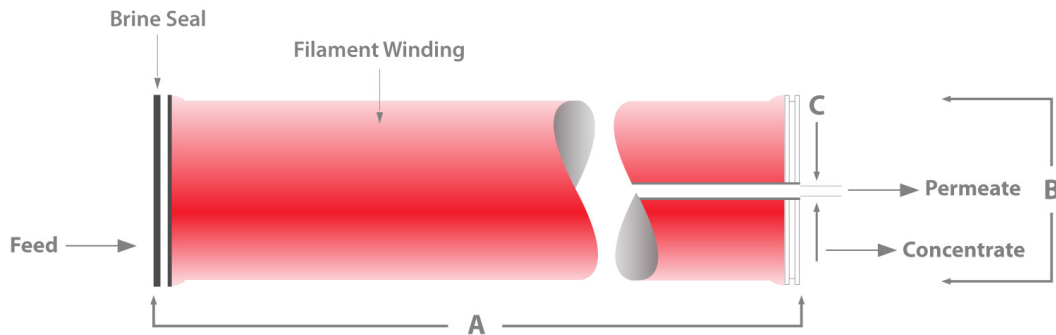
Lewabrane® RO S440 HF elements are spiral-wound, composite polyamide membrane elements designed for the desalination of seawater. The S440 HF membrane is characterized by an extremely durable, highly cross-linked polymeric separating layer suitable for high salinity, high pressure applications. The Lewabrane® RO S440 HF is recommended for single pass and two pass applications (depending on the salinity, temperature, and permeate quality requirement) where stable salt rejection performance over the expected lifetime is an important consideration.

General Information

	Metric units	US units
Feed spacer thickness	0.7 mm	28 mil
Membrane area	40.9 m ²	440 ft ²
Salt rejection, av.	99.8 %	99.8 %
Salt rejection, min	99.5 %	99.5 %
Boron rejection, typical	92.0 %	92.0 %
Permeate flow rate, av.	37.5 m ³ /d	9900 gpd
Permeate flow rate, min.	30.0 m ³ /d	7920 gpd

Element is tested under the following conditions: applied pressure 55.2 bar (800 psi), NaCl concentration 32,000 mg/l (or when tested on a mixed solution of 32,000 mg/l NaCl and 5 mg/l Boron), operating temperature 25 °C (77 °F), pH 8 and recovery rate 8 %.

Element Dimensions



	A (Length)	B (Diameter)	C (ID)
Metric Units	1016 mm	201 mm	29 mm
US Units	40 inch	7.9 inch	1.125 inch

This document contains important information and must be read in its entirety.

Application Data

	Metric units	US units
Operating pressure, max.	83 bar	1200 psi
Operating temperature, max.	45°C	113°F
Feed water SDI, max.	5	5
pH range during operating	2 - 11	2 - 11
pH range during cleaning	1 - 12	1 - 12
Pressure drop per element, max.	1.0 bar	15 psi
Pressure drop per vessel, max.	3.5 bar	50 psi
Chlorine concentration, max.	0.1 ppm	0.1 ppm

Additional Information

- Treat RO Elements with care; do not drop the element.
- Each RO Element is wet tested, preserved in a 1% weight sodium bisulfite solution, and vacuum packed in oxygen barrier bags.
- During storage, avoid freezing and direct sunlight. The temperature should be below 35 °C (95 °F).

After Installation

- Keep the RO Elements wet, and use a compatible preservative for storage duration longer than 7 days.
- During the initial start up, discharge the first permeate to drain for 30 min.
- Permeate back pressure should not exceed feed pressure at any time.
- The RO Elements shall be maintained in a clean condition, unfouled by particulate matter or precipitates or biological growth.
- Consider cleaning, if the pressure drop increases by 20% or water permeability decreases by 10%.
- Use only chemicals which are compatible with the membrane.
- For additional information consult the Lewabrane® technical information available at www.lpt.lanxess.com.

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